

## REMARKS

### *Election/Restrictions*

The Examiner restricted the claims under 35 U.S.C. § 121 for method and composition claims. Applicant's attorney provisionally elected to prosecute the invention of Group I, claims 1-5, and hereby affirms that election without traverse.

### *Claim Rejections – 35 U.S.C. § 112*

The Examiner rejected Claims 1-5 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, the Examiner stated it was unclear what an "aqueous...copolymer" is in Claim 1, line 10, and asked if it is a copolymer that is soluble in aqueous solution. The term "aqueous emulsion copolymer" has been amended to "aqueous emulsion polymer" to be consistent with the specification, particularly page 3, line 30 through page 7, line 9. Beginning at page 3, line 30, the term "emulsion polymers" is described. The term is well understood in the art as an *emulsion* of the polymer in a liquid medium. By definition it is not soluble in the liquid medium. In Claim 1 the liquid medium is water. An emulsion is an intimate mixture consisting of a semisolid or solid (as a resinous or bituminous material) dispersed in a liquid, usually with the aid of an emulsifier. Webster's Third New International Dictionary (Merriam-Webster, Inc. 1986). An "aqueous emulsion polymer" is a polymer dispersed in water with the aid of emulsifiers.

The Examiner stated that in Claim 1 it is not clear if the resin is a different entity from the "fibers, chips, particles." Claim 1 has been amended, rendering this rejection moot. Support for the amendment is found in the specification at page 2, lines 2-31.

The Examiner stated that the term "based" appears to be missing from Claim 5. This term has been added, rendering this rejection moot.

The Examiner stated that Claim 3 had no antecedent basis for emulsion polymer. Claim 1 has been amended, rendering this rejection moot.


The Examiner rejected Claim 5 under 35 U.S.C. § 112, first paragraph, for failing to comply with the written description. Specifically, the Examiner stated that page 3, line 30 describes the ion exchange resin as at least 1.5%, but claim 5 is 1.7%. Claim 5 has been amended to recite 1.5%, rendering this rejection moot. New Claim 11 has been added to claim the 1.7% limitation. Support for 1.7% is found in the examples, particularly samples 16, 20 and 24 of Example 2.

***Claim Rejections – 35 U.S.C. § 103***

The Examiner rejected Claims 1-5 under 35 U.S.C. § 103(a) as being unpatentable over US Patent 5747110. Applicant respectfully disagrees. A prior art reference must be considered in its entirety. M.P.E.P. § 2141.02, 8<sup>th</sup> Edition (August 2001). Applicant has amended Claim 1 to clarify that a sealing layer is applied to the surface of the compressed mat, thereby producing a laminated or coated product. Support for the sealer or topcoat language is found in the specification, including at page 2, lines 18-31. US '110 teaches incorporation or entrapment of materials within the pores of a woven or non-woven substrate to serve various functions, such as filtration of materials. It is concerned with depositing targeted agents into the three dimensional pore structure of a porous substrate. The process described in '110 is designed to retain the morphology of the substrate and to utilize its pore structure as a means of achieving desired benefits, such as with filtration. Applicant's invention is designed to create a multi-layered composite substrate, typically viewed as a laminate or a coating on top of a set substrate. A sealing layer, described as a sealer or topcoat in the specification, is applied to a surface. A sealer is a coating applied to prevent subsequent coats from sinking into the surface. The specification at page 2, lines 18-31, describes the role of the sealer or topcoat, which includes providing whiteness and blocking resistance. It would not have been obvious to one skilled in the art to use ion exchange resin in topcoats in press molding operations based on the teachings of '110, which describes incorporation of agents into the pore structure of a flexible porous web.

Applicant maintains that such claims are patentable in view of the amendments and arguments presented above. Applicant's invention would not have been obvious to one skilled in the art based on the references cited for the reasons above. Applicant's attorney thanks the Examiner for the time taken to review this response. In view of the foregoing remarks, Applicant respectfully requests reconsideration of the rejection and allowance of the claims. The Examiner is encouraged to contact the attorney listed below if there are any questions or comments.

Respectfully submitted,



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